

Amendments to the Claims

This listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims

Claims 1-23 (Canceled)

Claim 24. (Currently Amended) A display device comprising:

a first substrate having at least one side edge;

a plurality of first conductive lines extending over the first substrate in a first direction;

a plurality of second conductive lines extending over the first substrate in a second direction orthogonal to said first direction;

an interlayer insulating film disposed between said first conductive lines and said second conductive lines;

a plurality of thin film transistors disposed at locations adjacent to intersections of said first conductive lines and said second conductive lines;

a plurality of pixel electrodes electrically connected to said thin film transistors;

a second substrate located separated from said first substrate;

a sealing member disposed at a periphery of said first and second substrates, said sealing member having a portion adjacent to said side edge;

a conductive layer comprising a same material as said plurality of second lines and interposed between said portion of the sealing member and said first substrate;

wherein said conductive layer continuously extends along said side edge of said first substrate for more ~~a length longer~~ than a pitch of said second lines.

Claim 25. (Previously Presented) The display device according to claim 24 wherein each of said plurality of thin film transistors is a top-gate type thin film transistor.

Claim 26. (Previously Presented) The display device according to claim 24 wherein each channel region of each of said plurality of thin film transistors has a crystalline structure.

Claim 27. (Previously Presented) The display device according to claim 24 wherein said conductive layer is electrically isolated from either of said plurality of first conductive lines and said plurality of second conductive lines.

Claim 28. (Previously Presented) The display device according to claim 24 wherein said conductive layer extends in a form of a rectangular wave.

Claim 29. (Currently Amended) A display device comprising:

- a first substrate having at least one side edge;
- a plurality of scanning lines extending over the first substrate in a first direction;
- a plurality of signal lines extending over the first substrate in a second direction;
- a plurality of thin film transistors disposed at each intersection of said scanning lines and said signal lines;
- a plurality of pixel electrodes electrically connected to said thin film transistors;
- an interlayer insulating film disposed between said scanning lines and said signal lines;
- a second substrate opposed to said first substrate;
- a sealing member disposed at a periphery of said first and second substrates, said sealing member having a portion adjacent to said side edge;
- a conductive layer interposed between said portion of the sealing member and said first substrate, said conductive layer comprising a same material as said plurality of scanning lines, wherein said conductive layer continuously extends along said side edge of said first substrate for more a length longer than a pitch of adjacent ones of said scanning lines.

Claim 30. (Previously Presented) The display device according to claim 29 wherein each of said plurality of thin film transistors is a top-gate type thin film transistor.

Claim 31. (Previously Presented) The display device according to claim 29 wherein each channel region of said plurality of thin film transistors has a crystalline structure.

Claim 32. (Previously Presented) The display device according to claim 29 wherein said conductive layer is electrically isolated from either of said plurality of scanning lines and said plurality of signal lines.

Claim 33. (Previously Presented) The display device according to claim 29 wherein said conductive layer extends in a form of a rectangular wave.

Claim 34. (Withdrawn) A display device comprising:

a first substrate;

a plurality of scanning lines extending over the first substrate in a first direction;

a plurality of signal lines extending over the first substrate in a second direction;

a plurality of thin film transistors disposed adjacent to each intersection of said scanning lines and said signal lines;

a plurality of pixel electrodes electrically connected to said thin film transistors;

an interlayer insulating film disposed between said scanning lines and said signal lines;

a second substrate opposed to the first substrate;

a sealing member disposed at a periphery of said first and second substrates, wherein said plurality of scanning lines extend below and beyond a portion of said sealing member;

a plurality of conductive layers interposed between said first substrate and said portion of the sealing member, said plurality of conductive layers comprising a same material as said plurality of signal lines;

wherein said plurality of conductive layers are disposed between said plurality of scanning lines and below said portion of the sealing member in a location such that said plurality of conductive layers do not overlap said plurality of scanning lines.

Claim 35. (Withdrawn) The display device according to claim 34 wherein each of said plurality of thin film transistors is a top-gate type thin film transistor.

Claim 36. (Withdrawn) The display device according to claim 34 wherein each channel region of said plurality of thin film transistors has a crystalline structure.

Claim 37. (Withdrawn) The display device according to claim 34 wherein said conductive layers are electrically isolated from either of said plurality of scanning lines and said plurality of signal lines.

Claim 38. (Withdrawn) A display device comprising:

- a first substrate having a first pair of opposed edges and a second pair of opposed side edges;

- a plurality of scanning lines extending over the first substrate in a first direction along said first pair of opposed side edges;

- an interlayer insulating film formed over said plurality of scanning lines;

- a plurality of signal lines extending over interlayer insulating film in a second direction along said second pair of opposed edges;

- a plurality of thin film transistors disposed at each intersection of said scanning lines and said signal lines;

- a plurality of pixel electrodes electrically connected to said thin film transistors;

- a second substrate opposed to the first substrate;

- a sealing member disposed at a periphery of said first and second substrates, said sealing member having a portion located adjacent to one of said first pair of opposed side edges;

- a first plurality of conductive layers comprising a same material as said scanning lines and interposed between said first substrate and below said portion of the sealing member, wherein said interlayer insulating film covers said first plurality of conductive layers;

a second plurality of conductive layers interposed between said interlayer insulating film and said portion of the sealing member, said second plurality of conductive layers comprising a same material as said plurality of signal lines,

wherein said plurality of signal lines are electrically connected to said first plurality of conductive layers, respectively while second plurality of conductive layers are electrically isolated from either of said plurality of scanning lines and said plurality of signal lines.

Claim 39. (Withdrawn) The display device according to claim 38 wherein each of said plurality of thin film transistors is a top-gate type thin film transistor.

Claim 40. (Withdrawn) The display device according to claim 38 wherein each channel region of said plurality of thin film transistors has a crystalline structure.

Claim 41. (Currently Amended) A display device comprising:

a first substrate having at least one side edge;

a plurality of first conductive lines extending over the first substrate in a first direction;

a plurality of second conductive lines extending over the first substrate in a second direction orthogonal to said first direction;

a plurality of first thin film transistors disposed at each intersection of said first conductive lines and said second conductive lines;

a plurality of pixel electrodes electrically connected to said first thin film transistors;

an interlayer insulating film disposed between said first conductive lines and said second conductive lines;

a second substrate opposed to said first substrate;

a sealing member disposed at a periphery of said first and second substrates, said sealing member having a portion adjacent to said side edge;

a driver circuit comprising at least one second thin film transistor formed over said first substrate, said driver circuit disposed within a region surrounded by said sealing member; and

a conductive layer comprising a same material as said plurality of second lines and interposed between said portion of the sealing member and said first substrate;

wherein said conductive layer continuously extends along said side edge of said first substrate for more ~~a length longer~~ than a pitch of said second lines.

Claim 42. (Previously Presented) The display device according to claim 41 wherein each of said plurality of first thin film transistors is a top-gate type thin film transistor.

Claim 43. (Previously Presented) The display device according to claim 41 wherein each channel region of said plurality of first thin film transistors has a crystalline structure.

Claim 44. (Previously Presented) The display device according to claim 41 wherein said conductive layer is electrically isolated from either of said plurality of first conductive lines and said plurality of second conductive lines.

Claim 45. (Previously Presented) The display device according to claim 41 wherein said conductive layer extends in a form of a rectangular wave.

Claim 46. (Currently Amended) A display device comprising:
a first substrate having at least one side edge;
a plurality of scanning lines extending over the first substrate in a first direction;
a plurality of signal lines extending over the first substrate in a second direction;
a plurality of first thin film transistors disposed at each intersection of said scanning lines and said signal lines;
a plurality of pixel electrodes electrically connected to said first thin film transistors;
an interlayer insulating film disposed between said scanning lines and said signal lines;
a second substrate opposed to said first substrate;

a sealing member disposed at a periphery of said first and second substrates, said sealing member having a portion adjacent to said side edge;

a driver circuit comprising at least one second thin film transistor formed over said first substrate, said driver circuit disposed within a region surrounded by said sealing member;

a conductive layer interposed between said portion of the sealing member and said first substrate, said conductive layer comprising a same material as said plurality of scanning lines,

wherein said conductive layer continuously extends along said side edge of said first substrate for more a length longer than a pitch of the adjacent ones of said scanning lines.

Claim 47. (Previously Presented) The display device according to claim 46 wherein each of said plurality of first thin film transistors is a top-gate type thin film transistor.

Claim 48. (Previously Presented) The display device according to claim 46 wherein each channel region of said plurality of first thin film transistors has a crystalline structure.

Claim 49. (Previously Presented) The display device according to claim 46 wherein said conductive layer is electrically isolated from either of said plurality of scanning lines and said plurality of signal lines.

Claim 50. (Previously Presented) The display device according to claim 46 wherein said conductive layer extends in a form of a rectangular wave.

Claim 51. (Withdrawn) A display device comprising:

a first substrate;

a plurality of scanning lines extending over the first substrate in a first direction;

a plurality of signal lines extending over the first substrate in a second direction;

a plurality of thin film transistors disposed at each intersection of said scanning lines and said signal lines;

a plurality of pixel electrodes electrically connected to said thin film transistors;
an interlayer insulating film disposed between said scanning lines and said signal lines;
a second substrate opposed to the first substrate;
a sealing member disposed at a periphery of said first and second substrates wherein said plurality of scanning lines extend below and beyond a portion of said sealing member;
a driver circuit comprising at least one second thin film transistor formed over said first substrate, said driver circuit disposed within a region surrounded by said sealing member;
a plurality of conductive layers interposed between said first substrate and said portion of the sealing member, said plurality of conductive layers comprising a same material as said plurality of signal lines;
wherein said plurality of conductive layers are disposed between said plurality of scanning lines below said portion of the sealing member.

Claim 52. (Withdrawn) The display device according to claim 51 wherein each of said plurality of first thin film transistors is a top-gate type thin film transistor.

Claim 53. (Withdrawn) The display device according to claim 51 wherein each channel region of said plurality of first thin film transistors has a crystalline structure.

Claim 54. (Withdrawn) The display device according to claim 51 wherein said conductive layers are electrically isolated from either of said plurality of scanning lines and said plurality of signal lines.

Claim 55. (Withdrawn) A display device comprising:
a first substrate having a first pair of opposed side edges and a second pair of opposed side edges;
a plurality of scanning lines extending over the first substrate in a first direction along said first pair of opposed side edges;

an interlayer insulating film formed over said plurality of scanning lines;
a plurality of signal lines extending over interlayer insulating film in a second direction along said second pair of opposed side edges;
a plurality of first thin film transistors disposed at each intersection of said scanning lines and said signal lines;
a plurality of pixel electrodes electrically connected to said first thin film transistors;
a second substrate opposed to the first substrate;
a sealing member disposed at a periphery of said first and second substrates, said sealing member having a portion located adjacent to one of said first pair of opposed side edges;
a driver circuit comprising at least one second thin film transistor formed over said first substrate, said driver circuit disposed within a region surrounded by said sealing member;
a first plurality of conductive layers comprising a same material as said scanning lines and interposed between said first substrate and said portion of the sealing member, wherein said interlayer insulating film covers said first plurality of conductive layers;
a second plurality of conductive layers interposed between said interlayer insulating film and said portion of the sealing member, said second plurality of conductive layers comprising a same material as said plurality of signal lines,
wherein said plurality of signal lines are electrically connected to said first plurality of conductive layers, respectively.

Claim 56. (Withdrawn) The display device according to claim 55 wherein said second plurality of conductive layers are electrically isolated from either of said plurality of scanning lines and said plurality of signal lines.

Claim 57. (Withdrawn) The display device according to claim 55 wherein each of said plurality of first thin film transistors is a top-gate type thin film transistor.

Claim 58. (Withdrawn) The display device according to claim 55 wherein each channel region of said plurality of first thin film transistors has a crystalline structure.

Claim 59. (Withdrawn) A display device comprising:

- a first substrate having at least a first side edge and a second side edge;
- a plurality of first conductive lines extending over the first substrate in a first direction;
- a plurality of second conductive lines extending over the first substrate in a second direction orthogonal to said first direction;
- a plurality of thin film transistors disposed at each intersection of said first conductive lines and said second conductive lines;
- a plurality of pixel electrodes electrically connected to said thin film transistors;
- a first insulating film disposed between said first conductive lines and said second conductive lines;
- a second substrate opposed to said first substrate;
- a sealing member disposed at a periphery of said first and second substrates, said sealing member having a first portion along said first side edge and a second portion along said second side edge;
- a first plurality of conductive layers interposed between said first substrate and the first portion of said sealing member, said first plurality of conductive layers comprising a same material as said plurality of first conductive lines;
- a second plurality of conductive layers interposed between said first substrate and the first portion of said sealing member, said second plurality of conductive layers comprising a same material as said plurality of second conductive lines;
- a second insulating film disposed between said first plurality of conductive layers and said second plurality of conductive layers wherein said insulating film comprises a same material as said first insulating film; and
- a third conductive layer comprising a same material as said plurality of second lines and interposed between said second portion of the sealing member and said first substrate,

wherein said first plurality of conductive layers and said second plurality of conductive layers are arranged in turn, and

wherein said third conductive layer continuously extends along said second side edge for a length longer than a pitch of said second lines.

Claim 60. (Withdrawn) The display device according to claim 59 wherein each of said plurality of thin film transistors is a top-gate type thin film transistor.

Claim 61. (Withdrawn) The display device according to claim 59 wherein each channel region of said plurality of thin film transistors has a crystalline structure.

Claim 62. (Withdrawn) The display device according to claim 59 wherein said third conductive layer is electrically isolated from either of said plurality of first conductive lines and said plurality of second conductive lines.

Claim 63. (Withdrawn) The display device according to claim 59 wherein said third conductive layer extends in a form of a rectangular wave.

Claim 64. (Withdrawn) A display device comprising:
a first substrate having at least a first side edge and a second side edge;
a plurality of scanning lines extending over the first substrate in a first direction;
a plurality of signal lines extending over the first substrate in a second direction;
a plurality of thin film transistors disposed at each intersection of said scanning lines and said signal lines;
a plurality of pixel electrodes electrically connected to said thin film transistors;
a second substrate opposed to said first substrate;

a sealing member disposed at a periphery of said first and second substrates, said sealing member having a first portion adjacent to said first side edge and a second portion adjacent to said second side edge;

a first plurality of conductive layers interposed between said first substrate and the first portion of said sealing member, said first plurality of conductive layers comprising a same material as said plurality of scanning lines;

a second plurality of conductive layers interposed between said first substrate and the first portion of said sealing member, said second plurality of conductive layers comprising a same material as said plurality of signal lines;

a third conductive layer interposed between said second portion of the sealing member and said first substrate, said third conductive layer comprising a same material as said plurality of scanning lines,

wherein said first plurality of conductive layers and said second plurality of conductive layers are arranged in turn and isolated from each other; and

wherein said third conductive layer continuously extends along said second side edge for a length longer than a pitch of the adjacent ones of said lines.

Claim 65. (Withdrawn) The display device according to claim 64 wherein each of said plurality of thin film transistors is a top-gate type thin film transistor.

Claim 66. (Withdrawn) The display device according to claim 64 wherein each channel region of said plurality of thin film transistors has a crystalline structure.

Claim 67. (Withdrawn) The display device according to claim 64 wherein said third conductive layer is electrically isolated from either of said plurality of scanning lines and said plurality of signal lines.

Claim 68. (Withdrawn) The display device according to claim 64 wherein said third conductive layer extends in a form of a rectangular wave.

Claim 69. (Withdrawn) A display device comprising:

- a first substrate having a first side edge and a second side edge;
- a plurality of scanning lines extending over the first substrate in a first direction;
- a plurality of signal lines extending over the first substrate in a second direction;
- a plurality of thin film transistors disposed at each intersection of said scanning lines and said signal lines;
- a plurality of pixel electrodes electrically connected to said thin film transistors;
- an interlayer insulating film disposed between said scanning lines and said signal lines;
- a second substrate opposed to the first substrate;
- a sealing member disposed at a periphery of said first and second substrates, said sealing member having a first portion adjacent to the first edge of the substrate and a second portion adjacent to the second edge of the substrate wherein said plurality of scanning lines extend below and beyond the first portion of the sealing member;
- a plurality of first conductive layers interposed between said first substrate and the second portion of said sealing member, said plurality first of conductive layers comprising a same material as said plurality of scanning lines;
- a plurality of second conductive layers interposed between said first substrate and the second portion of said sealing member, said plurality of second conductive layers comprising a same material as said plurality of signal lines wherein said plurality of first conductive layers and said plurality of second conductive layers are arranged in turn;
- a plurality of third conductive layers interposed between said first substrate and said first portion of the sealing member, said plurality of third conductive layers comprising a same material as said plurality of signal lines;
- wherein said plurality of first conductive layers are disposed between a portion said plurality of scanning lines below said first portion of the sealing member.

Claim 70. (Withdrawn) The display device according to claim 69 wherein each of said plurality of thin film transistors is a top-gate type thin film transistor.

Claim 71. (Withdrawn) The display device according to claim 69 wherein each channel region of said plurality of thin film transistors has a crystalline structure.

Claim 72. (Withdrawn) The display device according to claim 69 wherein said conductive layers are electrically isolated from either of said plurality of scanning lines and said plurality of signal lines.